

PHASE I BOOK EXPLOITATION

SOV/5411

Konferentsiya po fiziko-khimicheskim osnovam proizvodstva stali. 5th,  
Moscow, 1959.

Fiziko-khimicheskiye osnovy proizvodstva stali; trudy konferentsii  
(Physicochemical Bases of Steel Making; Transactions of the  
Fifth Conference on the Physicochemical Bases of Steelmaking)  
Moscow, Metallurgizdat, 1961. 512 p. Errata slip inserted.  
3,700 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut metallurgii imeni  
A. A. Baykova.

Responsible Ed.: A. M. Samarin, Corresponding Member, Academy  
of Sciences USSR; Ed. of Publishing House: Ya. D. Rozentsveyg.  
Tech. Ed.: V. V. Mikhaylova.

Card 1/16

115

Physicochemical Bases of (Cont.)

SOV/5411

**PURPOSE:** This collection of articles is intended for engineers and technicians of metallurgical and machine-building plants, senior students of schools of higher education, staff members of design bureaus and planning institutes, and scientific research workers.

**COVERAGE:** The collection contains reports presented at the fifth annual convention devoted to the review of the physicochemical bases of the steelmaking process. These reports deal with problems of the mechanism and kinetics of reactions taking place in the molten metal in steelmaking furnaces. The following are also discussed: problems involved in the production of alloyed steel, the structure of the ingot, the mechanism of solidification, and the converter steelmaking process. The articles contain conclusions drawn from the results of experimental studies, and are accompanied by references of which most are Soviet.

Card 2/16

Physicochemical Bases of (Cont.)

SOV/5411

Shumov, M.M. Producing Steel and Semifinished Products in a Converter by Using Naturally Alloyed Chromium Pig Iron 268

Gurevich, B. Ye., V. D. Epshteyn, and T. V. Andreyev. Determining the Optimum Conditions of Slag Formation, Dephosphorization, and Decarburization of High-Phosphorus Pig Iron in a Semicommercial Converter With Oxygen Top Blowing 281

Baptizmanskiy, B. I., and Yu. A. Dubrovskiy. Investigating the Converter-Steel Contamination in Oxygen Top Blowing 292

Mazun, A. I., and A. S. Ovchinnikov. Gas Content in Steel Made in a Converter With Various Types of Blasts and Blowing 299

Afanas'yev, S. G., M. M. Shumov, and M. P. Kvitko. Some Kinetic and Process Regularities in the Oxygen Top Blowing of Pig Iron 308

Card 11/16

S/137/61/000/012/010/149  
A006/A101

AUTHOR: Shumov, M.M.

TITLE: Melting of steel and semiproducts from crude-alloy chrome-nickel cast iron in a converter

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 12, 1961, 47-48, abstract 12V284 (V sb. "Fiz-khim. osnovy proiz-va stali", Moscow, Metallurgizdat, 1961, 268 - 280)

TEXT: TsNIIChM and the Novo-Tul'skiy Metallurgical Plant developed converter refinement of Kalilovo cast iron with top supply of technically pure  $O_2$ . The work was performed in two directions: 1) refinement of cast iron with 2.5-3.0% Cr into low-alloy steel and carbon low-phosphorous semiproduct with about 0.8% Cr; 2) refinement of cast iron with 1.5% Cr melted from a mixture of crude-alloy and conventional open-hearth ores into low-alloy steel. On the whole 500 heats were produced, 47 of which with cast iron containing 1.4 - 1.6% Cr and 1.0-1.2% Ni. The heats were melted in a 7 - 9-ton converter, lined with magnesite, periclase-spindellide and chrome-magnesite bricks. It was established that when refining cast iron with 1.5% Cr, the process may be interrupted in the case of

Card 1/2

Melting of steel ...

S/137/61/000/012/010/149  
A006/A101

a high C content. A technology was developed for melting high-grade steel from cast iron with 3% Cr; in order to determine technical and economical indices this method should however be tested under industrial conditions. The technology of obtaining a semiproduct in the converter proved to be very complicated; the yield of liquid steel was low and the stability of lining was poor. The technology of melting low-alloy CXII-1 (SKhL-1), CXII-4 (SKhL-4) and other steel grades from cast iron with 1.5% Cr does not present any difficulties in production: steel output attains 87 - 89%; S and P content in the metal are  $< 0.040\%$ . To obtain steel with  $< 0.040\%$  S at 0.5 - 0.6% Mn, the S content in the cast iron should be  $< 0.045\%$ . Refinement in a basic converter of cast-iron with 1.1-1.2 Si is not expedient due to the reduced output of liquid steel, complicated technological process and reduced stability of the lining. The Si content should be  $< 0.8\%$ . The N content in the steel when refining Khalilovo cast iron is about 0.007%. To obtain steel with a lower N content  $O_2$  should be of 99.5% purity.

P. Arsent'yev

[Abstracter's note: Complete translation]

Card 2/2

S/123/62/000/003/001/006  
A054/A127

AUTHORS: Voinev, S. G., Kosoy, L. F., Shumov, M. M., Shalimov, A. G.,  
Chekhomov, O. M., Andreyev, T. B., Afanas'yev, S. G., Kalinnikov,  
Ye. S.

TITLE: Refining converter steel with liquid synthetic slag in the ladle

PERIODICAL: Stal', no. 3, 1962, 226 - 232

TEXT: The good results obtained in refining electric steels with liquid  
lime-aluminous slag led to pilot-plant tests with converter steels, using the  
same method. 111 heats were smelted in a basic 8-ton converter; 46 of them were  
refined in the ladle with liquid synthetic slags of the following composition  
(in %):

Card 1/5

Refining converter steel with...

S/133/62/000/003/001/008

A054/A127

Steel grade	Number of heats	CaO	Al <sub>2</sub> O <sub>3</sub>	SiO <sub>2</sub>	MgO	FeO	Cr <sub>2</sub> O <sub>3</sub>
UX15 (ShKh15)	6	<u>55.25</u> 53.04	<u>42.73</u> 41.47	<u>1.90</u> 3.85	<u>0.79</u> 0.80	<u>0.82</u> 0.90	<u>0.30</u> 0.17
12XH3A, 06H3 (12KhN3A), (06N3)	5	<u>52.49</u> 49.82	<u>42.46</u> 35.94	<u>2.02</u> 5.06	<u>0.78</u> 0.82	<u>0.90</u> 7.69	<u>0.94</u> 0.92
CT5 (SGV) (deep drawing steel)	7	<u>53.10</u> 51.37	<u>44.22</u> 38.34	<u>2.19</u> 4.52	<u>0.75</u> 0.93	<u>0.65</u> 4.05	<u>0.23</u> 0.23
1 (I) (tool, carbon, cable, rail, axle steel)	14	<u>53.58</u> 52.51	<u>44.08</u> 40.92	<u>2.06</u> 3.61	<u>0.69</u> 0.72	<u>0.70</u> 1.75	<u>0.15</u> 0.13

(numerator: composition prior to metal treatment; denominator: composition after the treatment). The slag was melted in a 3-ton arc furnace, with hearth and banks of carbon blocks and carbon packing. The slags differed from those used for electric steels in that they contained more silica, ferrous oxides and

Card 2/5

Refining converter steel with...

S/133/62/000/003/001/002  
AC54/A127

chrome oxides. To maintain the fluidity and reactivity of the slag under the test conditions, its quantity was increased to 6.5% of the metal weight, the temperature of the liquid slag in the furnace was raised to 1,750 - 1,850°C and the interval between pouring the slag and tapping the metal was reduced (to 2 min. 5 sec. on the average). The ladle was preheated to 600 - 800°C prior to slag tapping. The basic slag forming additives were common open-hearth lime (with up to 0.2% S), bauxite and in some cases (for medium-carbon and high-carbon steel grades) fluorite. Lime was added in two batches: prior to pouring the cast iron and 4 - 5 minutes after blowing started; the other two components were added together with lime. The quantity of the latter used for alloy and high-grade steels was 8 - 9%, for rail and axle steel 6 - 7% of the charge weight. ShKh15, 12KhN3A, 06N3 grades, deep-drawing steel and carbon (tool) steels were cast with fluorite (0.3 - 0.8% of the charge weight; the slag was tapped twice.) To determine the optimum cast iron composition, cast irons with components varying greatly in amount were used (0.28 - 0.78% Si, 0.50 - 1.80% Mn, 0.025 - 0.095% S, 0.085 - 0.220P). The slags were very active already at the beginning of blowing. The basicity of slags ( $\text{CaO}:(\text{SiO}_2+\text{P}_2\text{O}_5)$ ) increased progressively (5 - 5 1/2 minutes after blowing started it was 2.0, at the end of blowing: 3.0 - 4.0). The synthetic slag refining method in converters with oxygen top blast results in a

Card 3/5



3/133/52/000/003/001/008  
A054/A127

Refining converter steel with...

high degree of desulfuration. When cast irons are processed with a high (0.085 - 0.095%) sulfur content, this could be reduced to 0.030 - 0.042% during blowing and to 0.009 - 0.013% after slag treatment. Desulfuration is most effective in the У10-У13А (U10-U13A) grades (up to 72.8%), in axle steel (71.9%) and ShKh15 steel grade (67.8%). The final phosphorus content of steel can also be reduced to 0.020 - 0.030% by slag treatment, even if made of cast iron containing 0.22% phosphorus. The synthetic slag method reduces the content of oxygen and non-metallic inclusions (sulfides, oxides) of the steel. Converter structural steel grades, refined by synthetic slag, have a greater ductility and notch toughness (mainly across the fibre), than conventional converter, open-hearth and electric steels. Most probably, the ductility is improved by the effect of the synthetic slag emulsion on the metal which reduces the sulfur content and non-metallic inclusions; a sub-microscopic silicium-oxygen phase may also have some effect. Slag-refined converter axle steels displayed a high ductility at -20°, -40° and -60°C, the new refining method imparts the 06N3 cold-resistant converter steel at 150 - 183°C the same degree of frost-resistance as found in electric steels. The tests were carried out with A. N. Korneyenkov, G. V. Gurskiy, Ya. M. Bokshitskiy, A. K. Petrov, Ye. D. Mokhir, R. I. Kolyasnikova, G. A. Khasin, V. P. Danilin.

Card 4/5

Card 5/5

KVITKO, M.P.; SHUMOV, M.M.; AFANAS'YEV, S.G.

Investigating the oxygen-converter process for the converting of  
low-manganese pig iron. Stal' 23 no.6:501-508 Je '63.

(MIRA 16:10)

AFANAS'YEV, S.G.; DUKHANIN, A.S.; KVITKO, M.P.; SHUMOV, M.M.;  
DARUSHIN, R.I.; KOSHKIN, V.A.; ZAKHARENKO, N.I.;  
KRITININ, I.A.

Railroad rails made of oxygen-blown converter steel. Stal' 24  
no.1:72-73 Ja '64. (MIRA 17:2)

KAZANSKIY, V.V. (Moskva); LEVENETS, N.P. (Moskva); AFANAS'YEV, S.G.  
(Moskva); SHUMOV, M.M. (Moskva)

Viscosity of phosphate slags in the oxygen-blown converter  
process. Izv. AN SSSR. Met. i gor. delo no.6:64-69 N-D '64.  
(MIRA 18,3)

SHUMOV, N.D.

Cable guide rollers for the grabs of coal loaders. Koks i Khim. no.  
10:57 '62. (MIRA 16:9)

1. Cherepovetskiy metallurgicheskiy zavod.  
(Loading and unloading--Equipment and supplies)

SHUMOV, N.D.

Cracks in the runway girders of coal reloading machines. Koks  
i khim. no.9:56-59 '63. (MIRA 16:9)

1. Cherepovetskiy metallurgicheskiy zavod.  
(Cranes, derricks, etc.--Maintenance and repair)  
(Beams and girders--Welding)

SHUMSKAYA, N.I.

Labor safety in using epoxy resins. Mashinostroitel'  
no.12:33-34 D '64.

(MIRA 18:2)

SHUMOV, N.

Credit for operating capital for enterprises of the heavy industry.  
(In: Moscow. Nauchno-issledovatel'skii finansovyi institut. Nauch-  
nye zapiski. Moskva, 1953, p.169-204.) (MLRA 7:2)

1. Moscow. Nauchno-issledovatel'skiy finansovyy institut.  
(Credit)



SHUMOV, N; BARKOVSKIY, N., redaktor; SUBBOTINA, K., redaktor; LEHEDEV, A.,  
~~tekhnicheskii~~ tekhnicheskii redaktor.

[Short-term credit for industrial enterprises] Kratkosrochnoe kreditovanie promyshlennogo predpriatiia. Moskva, Gosfinizdat, 1954.  
126 p. (MIRA 8:4)  
(Credit)

SHUMOV, N.  
PODSHIVALENKO, P.; SHUMOV, N.

Paying by larger categories in the construction industry. Fin.1  
kred. SSSR no.3:35-43 Mr '54. (MLRA 7:4)  
(Construction industry--Finance)

SHUMOV, NIKOLAY SERGEYEVICH

N/5  
773.1  
.55

RASCHETNYYE KREDITY GOSBANKA PROMYSHLENNYM PREDPRIYATIYAM (GOSBANK CREDIT  
PAYMENTS BY INDUSTRIAL ENTERPRISES) MOSKVA, GOSFINIZDAT, 1956.

79 P.

SHUMOV, N.

The utilization of profits of industrial enterprises. Fin.SSSR 17 no.3:  
39-44 Mr '56. (MIRA 9:7)  
(Industrial management) (Profit)

SHUMOV, N.

Control work of financial organs. Fin. SSSR 17 no.12:8-16

D '56.

(MLRA 10:1)

(Finance)

N/5  
740.09  
.55

SHUMOV, NIKOLAY SERGEYEVICH

Kontrol' finansovykh organov za finansovo-khozyaystvennoy deyatel'nost'-  
yu promyshlennykh predpriyatiy (Check of financial devices for the finance  
and economy of industrial enterprises) Moskva, Gosfinizdat, 1957.

81 p. tables.

At head of title: Moscow. Nauchno--Issledovatel'skiy Finansovyy Institut.

SHUMOV, N. S

25(3)

PHASE I BOOK EXPLOITATION

SOV/1660

Meyerovich, Grigoriy Mikhaylovich, and Nikolay Sergeyevich Shumov

Finansirovaniye i kreditovaniye predpriyatiy legkoy promyshlennosti  
(Financing and Crediting Light Industry Establishments) Moscow,  
Gizlegprom, 1958. 241 p. 5,500 copies printed.

Reviewer: M. I. Pevzner; Ed. (Title page): N. T. Nikitin; Ed. (Inside  
book): N. M. Segal'; Tech. Ed.: L. Ya. Medvedev.

PURPOSE: The manual is intended for students in tekhnikums of the  
textile industry and other branches of light industry. It may  
also be useful to factory workers and serve also as a textbook  
for courses and seminars.

COVERAGE: This manual discusses: 1) principles of financial  
organization in industrial establishments; 2) methods of planning  
and using capital accumulations and current assets; 3) the  
sequence followed in financing capital construction and  
general overhaul; 4) problems encountered in setting up financial

Card 1/6

Financing and Crediting (Cont.)

SOV/1660

plans; and 5) short-term crediting of establishments and making payments. Data on production costs, income turnover, taxes etc. quoted in this textbook in tables and calculations, are used for illustrative purposes only. Chapters I, V, and VI were written by N.S. Shumov, and Chapters II, III, IV, and VII by G.M. Meyerovich. There are no references or personalities mentioned.

TABLE OF CONTENTS:

Foreword	3
Ch. I. Principles of Financial Organization for Industrial Establishments	5
Ch. II. Capital Accumulation of Industry (Monetary)	18
1. Expenditures of an industrial establishment on production and product realization	18
2. Proceeds from product realization	26
3. System and structure of prices	30
4. Two forms of capital accumulation	35
1. Turnover tax	36
2. Income of establishments; industrial branches	41

Card 2/6



SHUMOV, N.S., kand.ekonom.nauk; LAPTEV, Ye.N.; KAZANTSEV, A.I., kand. ekonom.nauk; ZUYEVA, Z.I.; KOCHEGAROVA, A.I.; SHRAYBER, I.I., kand.ekonom.nauk; TSAPIN, I.T.; KITAYGORODSKIY, I.P.; ZAVER-NYAYEVA, L., red.; TELEGINA, T., tekhn.red.

[Payments in industry] Raschety v promyshlennosti. Moskva, Gosfinizdat, 1959. 125 p. (MIRA 12:11)

1. Moscow. Nauchno-issledovatel'skiy finansovyy institut. 2. Zaveduyushchiy otdeleniyem Nauchno-issledovatel'skogo finansovogo instituta Ministerstva finansov SSSR (for Shumov). 3. Starshiy ekonomist Nauchno-issledovatel'skogo finansovogo instituta Ministerstva finansov SSSR (for Laptev). 4. Nachal'nik upravleniya kreditovaniya promyshlennosti sovnarkhozov Pravleniya Gosbanka SSSR (for Kazantsev). 5. Nachal'nik planovo-ekonomicheskogo otdela Moskovskoy gorodskoy kontory Gosbanka (for Zuyev). 6. Ekonomist Moskovskoy gorodskoy kontory Gosbanka (for Kochegarova). 7. Zamestitel' nachal'nika planovo-ekonomicheskogo upravleniya Rossiyskoy respublikanskoy kontory Gosbanka (for Shrayber). 8. Glavnyy bukhgalter moskovskogo khlebozavoda No.4 (for TSapin). 9. Ekspert otdela kredita i denezhnogo obrashcheniya Ministerstva finansov SSSR (for Kitaygorodskiy).  
(Payment)

MEYEROVICH, Grigoriy Mikhaylovich; SHUMOV, Nikolay Sargeyevich, kand.  
ekon.nauk; MITEL'MAN, Ye., otv.red.; FILIPPOVA, E., red.  
izd-va; LEBEDEV, A., tekhn.red.

[Financial organization in an industrial enterprise; based on  
materials of textile industry enterprises] Organizatsiia  
finansov na promyshlennom predpriatii; po materialam pred-  
priatii tekstil'noi promyshlennosti. Moskva, Gosfinizdat,  
1960. 109 p. (MIRA 13:4)  
(Textile industry--Finance)

BIRMAN, A.M., doktor ekonom.nauk; BRAZOVSKAYA, T.I.; BELOUSOVICH, S.N.;  
VESELKOV, F.S.; KATSENELBAUM, Z.S.; IVLIYEV, I.V.; SEMENOV, I.Ya.;  
YAKOVLEV, M.S.; LAYKHTMAN, R.I.; GOFMAN, G.A.; SHUMOV, N.S.;  
VINOKUR, R.D., dotsent; TATSIY, G.M., red.; KONDRAT'YEVA, A., red.;  
TELEGINA, T., tekhn.red.

[Finances of enterprises and branches of the national economy]  
Finansy predpriatii i otraslei narodnogo khoziaistva. Avtorskii  
kollektiv pod rukovodstvom A.M.Birmana. Moskva, Gosfinizdat, 1960.  
576 p. (MIRA 14:3)

1. Moskovskiy finansovyy institut (for Vinokur).  
(Finance)

SHUMOV, N.

Payment on acceptances and letters of credit. Den. 1 kred. 18 no.9:  
18-24 S '60. (MIRA 13:8)  
(Acceptances) (Letters of credit)

SHUMOV, P.S.

Construction of cultural and communal institutions and organization  
of public services in Belgorod Province villages. Zdrav. Ros. Feder.  
1 no.5:13-17 My '57. (MIRA 10:11)

1. Zaveduyushchiy Belgorodskim oblastnym otделom zdravookhrane-  
niya. (BELGOROD PROVINCE--HOSPITALS, RURAL)

ACCESSION NR: AP4043392

S/0181/64/006/008/2539/2541

AUTHORS: Sobolev, V. V.; Andriyesh, A. M.; Sy\*rbu, N. N.; Shumov, S. D.

TITLE: Reflection spectra of crystals of groups II-IV and III-VI

SOURCE: Fizika tverdogo tela, v. 6, no. 8, 1964, 2539-2541

TOPIC TAGS: indium antimonide, cadmium alloy, group II element, group III element, group IV element, group VI element, reflected radiation spectrum, band spectrum

ABSTRACT: This investigation was undertaken in connection with the great interest which is attached to compounds of the CdSb and  $\text{In}_2\text{Te}_3$  type. The energy structure of crystals of groups II--V and III--VI<sup>3</sup> was investigated at 290K in the region 1--6 eV. The reflection spectra of polished and etched crystals CdSb, ZnSb, 56% ZnSb-44% CdSb,  $\text{Cd}_4\text{Sb}_3$ ,  $\text{Zn}_3\text{Sb}_2$ ,  $\text{Zn}_4\text{Sb}_3$ ,  $\text{In}_2\text{Se}_3$ ,  $\text{In}_2\text{Te}_3$ ,  $\text{CdIn}_2\text{Se}_4$ ,  $\text{Ga}_2\text{Se}_3$ ,  $\text{Ga}_2\text{Te}_3$ ,

Card 1/3

ACCESSION NR: AP4043392

GaSe, and GaTe were investigated. The similarities and differences between the various spectra are briefly discussed. It is concluded that in view of the similarity of their reflection spectra, the crystals CdSb, ZnSb, and  $Zn_3Sb_2$ ,  $Zn_4Sb_3$ , and  $Cd_4Sb_3$  have similar energy-band structures and nearly equal transition energies. The general conclusion is that the compounds of groups II--V and III--VI are close to compounds of groups III--V and II--VI not only in lattice structure but also in the type of bond and energy-band structure. Orig. art. has: 1 figure.

ASSOCIATION: Institut fiziki i matematiki AN MoldSSR, Kishinev  
(Institute of Physics and Mathematics, AN MoldSSR)

SUBMITTED: 23Jan64

ENCL: 01

SUB CODE: SS

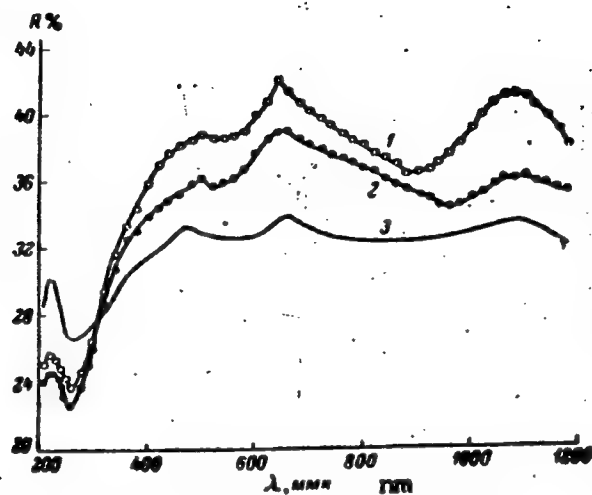
NR REF SOV: 003

OTHER: 001

Card 2/3

ACCESSION NR: AP4043392

ENCLOSURE: 01



Reflection spectra at  $T = 290^\circ\text{K}$  in the range of 1-6 eV; 1 - ZnSb, 2 - CdSb, 3 - In<sub>2</sub>Te<sub>3</sub>

Card 3/3



BRONNIKOV, K.Ye., podpolkovnik med.sluzhby, kand.med.nauk; SHUMOVA, S.V.,  
podpolkovnik med.sluzhby

Late results of surgery for injured menisci of the knee joint.  
Voen.-med.zhur. no.10:87 0 '61. (MIRA 15:5)  
(KNEE SURGERY)

SHUMOV, V., ZEN'KOVICH, Z., IVANOV, A.,

"The Rhythmic Production of Diesel-Electric Locomotives Necessitates  
Strict Cooperation," Gudok, 37, No. 45, p. 3, 22 Feb 1957, Moscow

Translation U-3,053,838

YERSHOV, Ye.M.; SUCHKOV, V.I.; SHUMOV, V.P.; FEDOROV, S.F.

Apparatus for amplitude and phase measurements in the inductive method.  
Geofiz.razved. no.4:48-64 '61. (MIRA 14:7)  
(Electromagnetic prospecting)

YERSHOV, Ye.M.; SUCHKOV, V.I.; SHUMOV, V.P.

Experimental studies of the electromagnetic fields of magnetic  
dipoles over mediums with horizontal and vertical interfaces.  
Geofiz.razv. no.13:102-122 '63.

(MIRA 17:4)

L 17160-65 EWT(1) ASD(a)-5/SSD/AFWL/AFETR/ESD(c)/ESD(gs)/ESD(t) GW/  
MLK

ACCESSION NR: AT4047269

S/0000/64/000/000/0175/0182

AUTHOR: Yershov, Ye. M.; Shumov, V.P.; Suchkov, V.I.

TITLE: Application of the induction method for solution of problems in geological mapping

SOURCE: Mezhvuzovskaya nauchnaya konferentsiya po induktivny'm metodam rudnoy geofiziki. Moscow, 1961. Trudy\*. Moscow, Izd-vo Nedra, 1964, 175-182

TOPIC TAGS: geological mapping, geological prospecting, induced electromagnetic field, terrestrial electromagnetic field, magnetic dipole

ABSTRACT: The possibility of application of the induction method with amplitude-phase measurements for the purposes of geological mapping is based on solution of the problem of the electromagnetic field of the magnetic dipole at the earth - air discontinuity. The magnetic moment of the magnetic dipole is considered to be purely fictitious. The values of the electromagnetic field are computed in relation to the parameter

$$p_1 = |kr| = \frac{2\pi r}{c} \sqrt{2if},$$

Card 1/3

L 17160-65

ACCESSION NR: AT4047269

$$p_i = 2,81 \sqrt{\frac{T}{\rho}} r,$$

The electromagnetic field of an inclined magnetic dipole is a linear combination of the fields of the horizontal and vertical dipoles. It therefore is sufficient to solve the problem for each of them separately. Solutions are available for the problems of the fields of horizontal and vertical magnetic dipoles over a horizontally layered structure for a distant zone, i.e.  $|kr| \gg 1$ , and for the induced zone, i.e.  $|kr| < 1$ . No solutions have been available for the transitional zone where the parameter ranges from 1 to 9. In geophysical investigations by the induction method in which ultrasonic frequencies are used (120-80 kc/s), it is most common to deal with parameters of 1.5-7. The authors therefore modeled the fields of horizontal and vertical dipoles over a two-layer structure with horizontal discontinuities. The model experiments are described. In field investigations by the induction method the apparatus used makes it possible to measure both the phase and amplitude of the different magnetic field components. The apparatus consists of a generator and a receiving apparatus. The low-frequency generator has a loop antenna at the output. The resistivities of rocks are determined easily from the phase differences of the components of the inclined dipole. The receiver is a superheterodyne receiver with one heterodyne for two channels, both of which are completely identical. There are phase inverters in each channel and

Card 2/3

L 17160-65

ACCESSION NR: AT4047269

installed in the second stage of a band-pass amplifier. The receiver is tuned to three fixed frequencies -- 20, 40 and 80 kc/s. Phase is measured at the intermediate frequency 465 kc/s, which makes it possible to simplify the phase inverter circuit considerably. The sensitivity of the receiver is 10  $\mu$ v on the scale of the indicator-type instrument. The antennas were loops at the inputs of both channels. This apparatus was used in developing the method of geological mapping in Karelia and the Transbaykal region (Yershov, Ye. M., Suchkov, V. I., and Shumov, V. P., Geofiz. razvedka, 1961, No. 4). Certain results of field investigations are reported in the paper reviewed. Orig. art. has: 6 formulas and 6 figures.

ASSOCIATION: Kompleksnaya tematicheskaya geofizicheskaya ekspeditsiya tresta Geofiznefteuglerazvedka (Complex Scientific Geophysical Expedition of the Geophysical Trust for Petroleum and Coal Prospecting)

SUBMITTED: 27Feb64

ENCL: 00

SUB CODE: ES, EM

NO REF SOV: 004

OTHER: 000

Card 3/3

SHUMOV, V. V.

"The Comet-Like Object in 1942, "Meteorniy Byull"." Izv. Turkmen FAN, No. 3(1946),  
pp. 3-4



LERMONTOVA, Ye.V.; CHERNYSHEVA, N.Ye., redaktor; SHUMOV, V.V., redaktor;  
MANINA, M.P., tekhnicheskii redaktor

[Upper Cambrian trilobites and brachiopods near Boshchekul (north-eastern Kazakhstan)] Verkhnekembriiskie trilobity i brakhiopody Boshche-Kulia (Severo-vostochnyi Kazakhstan). Moskva, Gos. izd-vo geologicheskoi lit-ry, 1951. 49 p. (MIRA 8:6)

(Boshchekul--Trilobites, Fossil)  
(Boshchekul--Brachiopoda, Fossil)

FOTEYEV, N.K., kand. tekhn. nauk; CHETVERIKOV, S.S., doktor tekhn.  
nauk prof., retsenzent; SHUMOV, Ye.G., inzh., retsenzent

[High-strength dies] Vysokostoikie shtampy. Moskva, Ma-  
shinostroenie, 1965. 257 p. (MIRA 18:7)

L 39705-65 EPP(n)-2/EPR/EWP(k)/EWT(d)/EWP(h)/EWP(m)/EWP(n)/EWP(b)/EWA(d)/EWP(l)/  
EWP(e)/EWP(v)/EWP(t) Pf-l/Ps-l/Pu-l IJP(c) KZ/WH/JD/JG  
ACCESSION NR: AP5010397 UR/0121/65/000/004/0025/0026

AUTHOR: Chetverikov, S. S.; Shumov, Ye. G.

TITLE: Electrical-discharge machining of carbide chasers

SOURCE: Stanki i instrument, no. 4, 1965, 25-27

TOPIC TAGS: carbide chaser, threading, threading tool, thread chasing, electrical discharge machining, carbide tool

ABSTRACT: Fabrication of sintered-carbide die-head chasers by electrical-discharge machining (EDM) is discussed. A circular rotating electrode (tool) with a profile and pitch corresponding to that of the thread reproduces its form on a tangential chaser. Using the high-frequency generator GIT-1 developed at TsNIL-ELEKTROM assures high metal-removal rates, a seventh-class of surface finish [0.8—1.6  $\mu$  (rms)], and an absence of surface cracks. Kerosene is used as dielectric fluid. The machining conditions were as follows: capacitance, 3300  $\mu$ uf for roughing and 1680  $\mu$ uf for finishing; pulse duration, 4  $\mu$ sec; pulse frequency, 20 kc; idle run

Card 1/2

L 39705-65

ACCESSION NR: AP5010397

voltage, 120 v. As a rule, the entire profile is formed in one cut; only with a considerable length (for a number of blanks) or when high precision is needed is a second finishing cut (depth of cut, 0.2—0.3mm) required. A large batch of experimentally machined chasers from sintered carbides of various types showed good performance characteristics. Orig. art. has: 5 figures. [SS]

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: IE

NO. REF SOV: 000

OTHER: 000

ATD PRESS: 3230

Card 2/2 MB

MASLENNIKOV, N.D., kand.tekhn.nauk; MYSHONKOV, N.I., kand.tekhn.nauk;  
ALEKSEYEV, B.I., kand.tekhn.nauk; SHUMOV, Ye.N., inzh.;  
MASLOV, A.A., inzh.; YANKELEVICH, V.M., inzh.; IZYUMSKIY, F.P.,  
inzh.

Investigating gas saturation of cast iron smelted in a cupola  
furnace. Mashinostroenie no.6:33-36 N-D '62. (MIRA 16:2)  
(Cast iron—Defects)

70-2-5/24

AUTHOR: Venevtsev, Yu.N., Kapyshev, A.G. and Shumov, Yu.V.  
 TITLE: An X-ray structural investigation of the system  
 $\text{PbTiO}_3 - \text{BaSnO}_3$ . (Rentgenograficheskoye issledovaniye systemy  
 $\text{PbTiO}_3 - \text{BaSnO}_3$ .)  
 PERIODICAL: "Kristallografiya" (Crystallography), 1957, Vol.2,  
 No.2, pp.233-238 (U.S.S.R.)

ABSTRACT: X-ray powder photographs of the system  $\text{PbTiO}_3 - \text{BaSnO}_3$  at various temperatures showed a continuous range of solid solutions. The phase diagram of  $(\text{pb,Ba})(\text{Ti,Sn})\text{O}_3$  was constructed showing only two phases, one cubic (paraelectric), the other tetragonal (ferro-electric). The diagram agrees with that traced from dielectric measurements by I.E. Myl'nikova. The Curie temperature in this system falls more sharply with increasing Sn concentration than in the  $\text{Pb}(\text{Ti,Sn})\text{O}_3$  system. Both  $\text{SnTiO}_3$  and  $\text{BaSnO}_3$  have the perovskite structure but the former compound is ferro-electric. Examination of their solid solutions was expected to elucidate some of the factors leading to ferro-electricity in the perovskite structures. Specimens were prepared in the Institute for Silicate Chemistry (IKhS AN SSSR) from  $\text{BaCO}_3$ ,  $\text{TiO}_2$ ,  $\text{SnO}_2$  and  $\text{PbO}$  by heating at

Card  
1/3

An X-ray structural investigation of the system  $\text{PbTiO}_3$ - $\text{BaSnO}_3$ . (Cont.) <sup>70-2-5/24</sup>

1 250 C for one hour. X-ray powder photographs were taken with Cu or Cr radiation measuring particularly the high angle lines. The accuracy in the cell sides was about  $\pm 0.003$  A.

A change from the tetragonal form ( $\text{PbTiO}_3$ ) to the cubic ( $\text{BaSnO}_3$ ) took place at 43 mol % of the latter with no discontinuity in the cell volume. The ratio c/a does not decrease continuously to 1 but drops sharply from 1.005. High temperature photographs from 30 mol %  $\text{BaSnO}_3$  showed a Curie temperature of  $190 \pm 10$  C compared with 490 C for pure  $\text{PbTiO}_3$ . Specimens with 43 mol %  $\text{BaSnO}_3$  have a Curie temperature about 15 C. A specimen with a Curie temperature of -183 C will have a composition of between 40 and 60%  $\text{BaSnO}_3$ . A rhombohedral phase of  $\text{Pb}(\text{Ti},\text{Sn})\text{O}_3$  is found. The correctness of the factors proposed earlier by Venevtsev (Dissertation, MIFI, Moscow, 1955, and Izv. Ak. Nauk, Ser Fiz., 21, 2, 1957) as influencing the Curie temperatures of compounds with t less than 1 is confirmed.

Card 2/3 Discussions with Prof. G.S. Zhdanov and the assistance of Dr. G.A. Smolenskiy and Cand. I.E. Myl'nikova are acknowledged. There are 4 figures and 19 references, 9 of which are Slavic.

●An X-ray structural investigation of the system  $\text{BaSnO}_3$ . (Cont.)  $\text{PbTiO}_3$  <sup>70-2-5/24</sup> -

ASSOCIATION: Physico-Chemical Institute im. L.Ya. Karpova. (Fiziko-  
Card 3/3 Khimicheskiy Institut i. L.Ta. Karpova)  
SUBMITTED: November 16, 1956.  
AVAILABLE: Library of Congress



SHUMOV, Yu.V.

Representation of minerals on Russian maps of the 18th century.  
Geod. i kart. no.3:57-62 Mr '64. (MIRA 17:9)

SHUMCV, Yu.V.

Discussing the agricultural atlas of the U.S.S.R. Izv. AN SSSR.  
Ser. geog. no. 4:160-161 J1-Ag '61. (MIRA 14:7)  
(Agriculture--Maps)

BERZINA, L.A.; MAUDERMAN, O.Ye.; OKINSHEVICH, Ye.A.; SHUMOVA, B.I.

Influence of various factors on antitoxic immunity to scarlet fever as shown by the Dick test in children. Vop.okh.mat. i det. 4 no.3:36-41 My-Je '59. (MIRA 12:8)

1. Iz infektsionnogo otdela (zav. - prof.M.Ye.Sukhareva) kafedry pediatrii (zav. - deystvitel'nyy chlen AMN SSSR G.N.Speranskiy) Tsentral'nogo instituta usovershenstvovaniya vrachey, epidemiologicheskogo otdela (zav. - prof.Ye.M.Dmitriyeva-Ravikovich) Moskovskogo nauchno-issledovatel'skogo instituta epidemiologii, mikrobiologii i gigiyeny i sanitarno-epidemiologicheskoy stantsii Kiyevskogo rayona Moskvyy (glavnyy vrach I.F.Krasavin). (SCARLET FEVER)

SHERMAN, R.Z.; SHEVYAKOVA, O.I.; TATARINOVA, S.D.; SHUMOVA, B.I.;  
GOL'TSEKER, A.I.; KOLESNIKOVA, Yu.S.

Bacteriophage and tetracycline in the prevention of dysentery  
among contact children. Antibiotiki 10 no. 10:948-952  
O '65. (MIRA 18:12)

1. Kafedra mikrobiologii (zav. - deystvitel'nyy chlen AMN SSSR  
prof. Z.V. Yermol'yeva) TSentral'nogo instituta usovershenstvo-  
vaniya vrachey i Sanitarno-epidemiologicheskoy stantsii (glavnyy  
vrach I.F. Krasavin) Kiyevskogo rayona, Moskva. Submitted  
Dec. 13, 1963.

SHUMOVA, I.A.

In vivo study of the effect of lead nitrate on the cell.  
Trudy ISGMI 45:164-171 '58 (MIRA 11:11)

1. Kafedra obshchey biologii Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta (zav. kafedroy - chlen-korrespondent AMN SSSR, prof. P.V. Makarov).  
(LEAD--PHYSIOLOGICAL EFFECT)

SHUMOVA, I.A.

Cytochemistry of cancer cells of the human cervix uteri and breast. TSitologiya 1 no.4:436-442 J1-Ag '59. (MIRA 12:10)

1. Kafedra obshchey biologii Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta.

(UTERUS--CANCER) (BREAST--CANCER) (NUCLEIC ACIDS)  
(POLYSACCHARIDES)

SHUMOVA, I.A.

Cytochemical studies on nucleic acids, proteins, and polysaccharides  
in human cervical and breast tumor cells. Biul.eksp.biol. i med.  
48 no.7:68-72 J1 '59. (MIRA 12:10)

1. Iz kafedry obshchey biologii Leningradskogo sanitarno-  
gigiyenicheskogo meditsinskogo instituta. Predstavlena  
deystvitel'nym chlenom AMN SSSR N.G.Khlopinyam.

(NUCLEIC ACIDS - metab.)

(PROTEINS - metab.)

(POLYSACCHARIDES - metab.)

(BREAST - neoplasms)

SHUMOVA, I. A., Dr.,

"About cytochemical differentiation of cancer cells."

To be submitted for the International Congress of Exfoliative Cytology, Vienna, Austria, 31 Aug-2 Sep 1961.

Institute of Evolutionary Physiology imeni I. N. Sechenov, Leningrad.



ca

9

Solid solutions of beryllium and magnesium in copper.  
S. A. Pogodin and I. S. Shumova. *Bull. acad. sci. U. R. S. S. Classe sci. chim.* 1940, No. 5, 763-74.—Twelve alloys contg. 0.5-2.5% Be and 0.4-0.8% Mg were investigated, and the copper corner of the ternary system Cu-Be-Mg was detd. by means of methods of thermal analysis, microstructure and hardness. Electrolytic Cu and Cu-Be-Mg alloys, contg. 7.6-10.0% Be and 1.1-4.2% Mg, and also a Cu-Mg alloy with 37% Mg were used for making these alloys. The limits of the  $\alpha$ -phase, i. e., ternary solid soln. of Be and Mg in Cu at 800°, 650°, 500° and 250°, sepg. the region of  $\alpha$ -phase from the adjacent heterophasic regions were detd. The mutual decrease of soly. of Be and Mg in solid Cu by each other is shown. The aging of all ternary alloys obtained and the retarding of the aging of alloys contg. 2.0 or 2.5% Be and 0.4-0.8% Mg were studied. Alloys contg. 2.5% Be and 0.4% Mg as well as 1.8% Be and 0.4-0.8% Mg, after hardening at 800° and aging at 350°, have the same hardness as the Mg-free alloys with 2.5% Be, but they have less impact strength than Mg-free bronzes. Aging appeared in alloys contg. 0.5% Be and 0.8-2.8% Mg. 10 references. S. Machelson

PROCESSES AND PROPERTIES INDEX

\*Copper-Zirconium Alloys. S. A. Pogorilov and I. S. Shumova (*Izv. Akad. Nauk SSSR, Ser. Fiziko-Khim. Analiz.*, 1940, 13, 225-232).—[In Russian.] Copper-zirconium alloys containing up to 35-65% zirconium were prepared by melting in a magnesite crucible in a Kryptol furnace, the best results being obtained when using a KCl-NaCl mixture in equimolecular proportions as flux. The constitutional diagram was determined by thermal analysis and confirmed by microscopic examination. The liquidus consists of two branches marking the primary crystallization of copper and of the  $\beta$  phase, respectively. The point of intersection at the eutectic is at 12.9% zirconium, 980° C. The  $\beta$  phase consists of the compound  $Cu_2Zn$  (32.65% zirconium) with a melting point of 1138° C. The solid solubility of zirconium in copper was investigated microscopically. The limiting solubilities are 0.9% at 925° C., 0.7% at 825° C., and 0.28% at 600° C. These experimental results agree very well with those calculated from Le Chatelier's expression. The existence of precipitation-hardening in copper-zirconium alloys was confirmed by hardness tests on cast alloys quenched from 900° C. and heat-treated at 300° C. for periods up to 20 hrs. The hardness-heat-treatment-time curves after falling to a minimum at the beginning rise to a well-marked maximum, the hardness then falling off slightly, and after passing through a second flat maximum ultimately declining.—A. B.

METALLURGICAL LITERATURE CLASSIFICATION

*M*

10

PROCESS AND PROPERTIES INDEX

\*Copper Zirconium Alloys. S. A. Pogodin, I. S. Shumova, and P. A. Kugutsheva (*Compt. rend. (Doklady) Acad. Sci. U.R.S.S.*, 1949, 27, 670-672; *Brit. Abs.*, 1946, [A 1], 18).—Thermal analysis of copper-zirconium alloys containing up to 30% of zirconium shows primary crystallization of copper-rich solid solutions and of  $\text{Cu}_2\text{Zr}$  or solid solutions of copper in  $\text{Cu}_2\text{Zr}$  with a eutectic at 950° C., 12-9% of zirconium. The eutectic point corresponding to  $\text{Cu}_2\text{Zr}$  is at 1140° C., 32-4% of zirconium. The microstructure of quenched samples annealed at various temperatures shows that the solubility of zirconium in copper is 0-9% at 925° C., 0-7% at 825° C., and 0-28% at 600° C. The addition of 0-14-0-30% of zirconium increases the resistance of work-hardened copper to annealing at 400-500° C., and decreases its conductivity by +15%.

METALLURGICAL LITERATURE CLASSIFICATION

SHUMOVA, I.S.

POGODIN, S.A.; SHUMOVA, I.S.

Equilibrium diagram of the system aluminum-indium. Izv. Sekt. fiz.-khim.  
anal. 17:200-203 '49.  
(MLRA 7:6)

1. Institut obshchey i neorganicheskoy khimii [im. N.S.Kurnakova]  
Akademii nauk SSSR. 2. Gosudarstvennyy nauchno-issledovatel'skiy institut redkikh i malykh metallov.  
(Aluminum-indium alloys)



6(5)

06438

SOV/107-59-5-33/51

AUTHORS: Apollonova, L., Shumova, N.  
TITLE: Stereophonic Records  
PERIODICAL: Radio, 1959, Nr 5, pp 42 - 45 (USSR)  
ABSTRACT: The authors describe in detail the stereophonic recording system which was developed abroad. They mention the 45/45 system recommended by the International Electrical Engineering Commission. There are 7 diagrams, 1 table and 1 graph.

Card 1/1

APOLLONOVA, L.ubov' Pavlovna; SHUMOVA, Nina Dmitriyevna;  
KOROL'KOV, V.G., red.

[Mechanical sound recording] Mekhanicheskaja zvukozapis'.  
Moskva, Energiia, 1964. 240 p. (MIRA 17:12)

APOLLONOVA, L.P.; SHUMOVA, N.D.

Distortions caused by the tone arm of the sound pickup and ways to  
reduce them. Trudy VNAIZ no.5:34-49 '59. (MIRA 15:4)  
(Sound—Recording and reproducing) (Phonographs—Testing)



PA 61/49T40

SHUMOVA, N. T.

USSR/Medicine - Central Nervous System Nov/Dec 48  
Medicine - Hypercholesteremia

"Experimental Data on the Problem of the Importance  
of Degenerative Processes of the Central Nerve  
Fibers of the Brain in the Genesis of Hyperchole-  
steremia," N. T. Shumova, Chair of Path Physiol.,  
First Moscow Ord of Lenin Med Inst, 10 pp

"Arkhiv Patol" Vol X, No 6

Endogenous hypercholesteremia may be caused by a  
disease of the central cholesterol depot in the  
brain associated with phenomena of degeneration of  
myelin fibers, with myelin decomposition, and with

61/49T40

USSR/Medicine - Central Nervous System Nov/Dec 48  
(Contd)

the transfer of the most essential component of  
myelin - cholesterol in the blood.

61/49T40

... ..

... .. the discussion concerning Pleski's operations.  
... .. 001-213-32 F '64. (REF 17:1)

SHUMOVA, O. I.

Shumova, O. V. -- "The Pathogenesis and Treatment of Diseases from Burns."  
Acad Med Sci USSR. Moscow, 1956. (Dissertation For the Degree of Candidate  
in Medical Sciences).

So: Knizhnaya Letopis', No. 11, 1956, pp 103-114

SHUMOVA, O.V., kand. med. nauk.

Result of treatment of burns by the A.V. Vishnevskii method. Sov. med.  
22 no.12:60-65 D '58. (MIRA 12:1)

1. Iz 3-go khirurgicheskogo otdeleniya (zav. - prof. G. D. Vilyavin)  
Institut khirurgii imeni A.V. Vishnevskogo (dir. - deystvitel'nyy chlen  
Akademii meditsinskikh nauk SSSR prof. A.A. Vishnevskiy).

(BURNS, ther.  
(Rus))

SHUMOVA, O.V., ~~land~~ med.nauk

Pathogenesis and treatment of pulmonary edemas in mitral stenosis.  
Zdrav. Kazakh. 21 no.9:9-12 '61. (MIRA 14:10)

1. Iz 1-go khirurgicheskogo otdeleniya (zav. - doktor med.nauk  
N.K.Galankin) Instituta khirurgii imeni A.V.Vishnevskogo AMN SSSR.  
(PULMONARY EDEMA) (MITRAL VALVE—DISEASES)

SHUMOVA, O. V., Moskva, Leninskiy prosp., d. 87a, korp. 1. kv. 48

Surgical treatment of mitral insufficiency. Grud. khir. 4 no.1:  
10-12 Ja-F '62. (MIRA 15:2)

1. Iz Instituta khirurgii imeni A. V. Vishnevskogo AMN SSSR  
(dir. -- deystvitel'nyy chlen AMN SSSR prof. A. A. Vishnevskiy)

(MITRAL VALVE--SURGERY)

VILYAVIN, Georgiy Danilovich, prof.; SHUMOVA, Olimpiada Vasil'yevna,  
kand. med.nauk; GINZBURG, R.L., red.; MIRONOVA, A.M., tekhn.  
red.

[Pathogenesis and treatment of burn disease] Patogenez i le-  
chenie ozhogovoi bolezni. Moskva, Medgiz, 1963. 275 p.  
(MIRA 16:12)

(BURNS AND SCALDS)

AUTHORS: Polivanov, V.V., Il'in, V.V. SOV/48-23-4-4/21  
Iz'yurov, A.V., Pyatakov, N.I., Shumova, R.V.

TITLE: The Feeding Installation of Electron Microscopes UEMB-100  
(Pitayushcheye ustroystvo elektronnoy mikroskopa UEMB-100)

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya fizicheskaya, 1959,  
Vol 23, Nr 4, pp 450 - 453 (USSR)

ABSTRACT: First, mention is made of the investigation carried out by  
Leisegang (Ref 1), and it is pointed out that the require-  
ment in electron microscopes with voltages as high as  
100 kv of not allowing voltage and current fluctuations  
at the lenses to exceed  $14 \cdot 10^{-3} \%$  can be met only by  
electronic stabilization of the current source. Figure 1  
shows the block diagram of the apparatus. The electromagnetic  
stabilizer SNE-220-0,5 is made use of in the scheme. The  
lens current is electronically stabilized, its fluctuation  
amounting to 0.001%. The number of ampere turns of all  
lenses can be varied in a wide range. The selenium rectifiers  
for the high voltage of 100 kv allow a load of 120  $\mu$ A, the  
electronic stabilization of this high voltage occurs through

Card 1/2



The Feeding Installation of Electron Microscopes SOV/48-23-4-4/21  
UEMB-100

anode tubes of the type 6Kh6S. Here as well, voltage fluctuation amounts to 0.001%. A description follows of the current supply into the vacuum cell of the instrument. Figure 4 shows the scheme of the focusing electrode of the electron accelerator, in which a diode of the type 2D9S is used. Finally, the present paper deals with the mechanical construction of the current source, the insertion into the whole instrument, and its applicability. There are 6 figures and 3 references, 1 of which is Soviet.

Card 2/2

17(

SOV/177-58-9-2/51

AUTHORS: Zotov, A.P., Colonel of the Medical Corps, Shumova, S.V., Lieutenant-Colonel of the Medical Corps

TITLE: Analysis of Traumatism and Prophylactic Measures  
(According to Material of a Hospital)

PERIODICAL: Voenno-meditsinskiy zhurnal, 1958, Nr 9, pp 7-10  
(USSR)

ABSTRACT: The author tabulates and reports on traumatic cases of soldiers. The article is based on data of a garrison hospital and a treatise by N.D. Krivonosov, published in 1952. Most of the injuries occurred during off-duty hours. The author distinguishes injuries connected with economic work, casual injuries sustained during duty hours and, mainly, sports injuries. Injuries to the lower extremities predominate over others. The implementation of prophylactic measures reduced the injuries in garrisons "by half". There are 4 tables.

Card 1/1

BRONNIKOV, K.Ye., kand.med.nauk; SHUMOVA, S.V.

Meniscus injuries of the knee joint. Vest.khir. no.4:38-42  
'61. (MIRA 14:4)

(~~KNEE~~ WOUNDS AND INJURIES)

SHUMOVA, S. V. (Lieutenant Colonel of the Medical Service) BRONNIKOV, K.YE.

"Remote Results of Surgical Treatment of Injuries to the Knee Joint Menisci"

Voyenno-Meditsinskiy Zhurnal, No. 10, October, 1961

L 05206-67 EWT(m)/EWP(t)/ETI IJP(c) JD/JG

ACC NR: AP7000758

SOURCE CODE: UR/0075/66/021/006/0754/0757

AUTHOR: Sotnikov, V. S. Korolev, N. V. Shumova, V. V. and Korozova, M. N.

33  
B

ORG: none

TITLE: Use of an emission microspectral method in the analysis of alloys for semiconductor devices

SOURCE: Zhurnal analiticheskoy khimii, v. 21, no. 6, 1966, 754-757

TOPIC TAGS: emission spectrum, indium alloy, gallium alloy, gold alloy

ABSTRACT: A microspectral method for the analysis of the In - Au - Ga and other alloys in specimens weighing less than 0.5 mg is examined. Alloy specimens in tablets 50X150 microns in size were placed on a polished surface of a glass bar, and then the specimens were covered with a copper plate about 1 mm thick which was tapped lightly with a hammer so that the specimens were secured to the surface of the copper plate. Then tablets were secured to the surface layer of the plate. Pellets of standard alloys were similarly secured to a copper plate, and a microspectral analysis was made. Copper wire 0.4 mm in diameter with ends cut at a 130° angle served as the electrode. The distance between one of the electrodes from the surface of the specimen was 1 mm; the second electrode was connected to the copper plate. Orig. art. has: 2 figures and 1 table. [JPRS: 37,177]  
SUB CODE: 11,20/ SUBM DATE: 02Jun65 / ORIG REF: 002

Cord 1:1 *gd*

UDC: 543.42  
0423 1934

SHUMOVA, Zinaida Ivanovna; SOBKINA, Irina Viktorovna; GUSMAN, M.T., redaktor;  
KOVALEVA, A.A., vedushchiy redaktor; SHIKIN, S.T., tekhnicheskii  
redaktor

[Concise manual on turbine drills] Kratkii spravochnik po turboburam.  
Moskva, Gos. nauchno-tekhn. izd-vo neftianoi i gorno-toplivnoi lit-ry,  
1956. 141 p. (MLRA 9:10)  
(Boring machinery)

93-4-1/20

AUTHOR: Nurshanov, V.A., Shumova, Z.I.,

TITLE: Advanced Turbine Drilling Methods Must Find Wider Application (Shire ispol'zovat' peredovoy opyt ekspluatatsii turboburov)

PERIODICAL: Neftyanoye Khozyaystvo, 1957, Nr.4, pp.1-5 (USSR)

ABSTRACT: The use of turbodrilling equipment manufactured by the Uralmashzavod has yielded positive results. Turbodrilling meterage has been up to 5 million meters per annum, constituting 84.7 percent of the total USSR drilling, and 99.8 percent of the drilling operations of the Glavvostokneftedobycha Trust. New types of turbodrills are being used in exploratory drilling. They are able to drill bore holes 8 to 12 inches in diameter, and over. Although operating conditions are becoming more difficult with increasing depths, the management has failed to put the necessary effort into solving the problem of turbodrill operation and repair. An investigation of the Kuybyshevneft', Bashneft', and Chkalovnefterazvedka

Card 1/4

93-4-1/20

Advanced Turbine Drilling Methods Must Find Wider Application. (Contd).

enterprises has revealed that the quality of turbodrill maintenance work is grossly inadequate. As a result, life of the turbodrills is being greatly reduced. A table, which is included in the text, gives data on the life of turbodrills used by different enterprises. For example, turbodrill life at one of the 'Tuymazaburneft' drilling units was 40 to 60 hours before 1956. Today it is 18 hours, having been shortened by improper operating practices and faulty repair work. In many cases the manufacturing plants deliver equipment with obvious imperfections, while in other cases breaks occur in certain parts as a result of poor heat treatment. Among the plants producing defective parts is the "Borets" plant (affiliated with Glavneftemash) and the Petrov plant (located in Stalingrad). Despite the efforts of the VNIIBurneft', the Sverdlovsk and Leningrad rubber plants have failed to standardize their production of petroleum-resis-

Card 2/4



93-4-1/20

Advanced Turbine Drilling Methods Must Find Wider Application. (Contd).

tant rubber parts for the turbodrill. The Glavnefterazvedka, which has under its jurisdiction 7 prospecting offices and 49 exploratory drilling units, has only 17 repair shops. These lack adequate equipment, which reflects in the quality of their repair work, as confirmed by tests conducted on an experimental electrified production drilling rig belonging to the Azerbaydzhan branch of the Petroleum Industry. Seventy percent of 80 reconditioned T12M2-10 turbodrills had a rotation moment ranging from 70 to 100 percent of the nominal moment, while the remaining thirty percent had a moment ranging from 30 to 70 percent. The present repair shops are too small for the volume of work required. Occasionally, a section of the drilling rig serves as a repair shop (e.g., at the Ozek-Suata, Grozneft', drilling enterprise, where this was the case until September 1956). Life of the T12M2-10 turbodrill can be extended by a better make-up of the threaded ends (torque moment 1800-2000, instead of 1200 kg). This is often impossible to put into practice, due to the lack of proper power

Card 3/4

SHUMOVA, Zinaida Ivanovna; PETROVA, Ye.A., ved.red.; POLOSINA, A.S.,  
tekh. red.

[Practical guide on the operation of turbodrills] Prakticheskoe rukovodstvo po ekspluatatsii turboburov. Moskva, Gos-  
toptekhnizdat, 1962. 209 p. (MIRA 15:3)  
(Turbodrills)

SHUMOVICH, M., prepodavatel' osnov tekhnicheskoy mekhaniki

In the study room for technical mechanics. Prof.-tekh. obr. 19  
no.9:14-15 S '62. (MIRA 15:10)

1. Remeslennoye uchilishche No. 47, Moskva.

(Mechanics—Study and teaching)

SHUMOVICH, M., преподаvatel' tekhnicheskoy mekhaniki

School of technical creativeness. Prof.-tekh. obr. 20 no.12:  
13-15 D '63. (MIRA 17:1)

1. Moskovskoye professional'no-tekhnicheskoye uchilishche No.27.

SHUMOVICH, V.

Seminar in the laboratories of an institute. Prof. tekh. sk. 21  
nr. 7:11-11 Ji '64. (MIRA 17:11)

SHUMOVICH, M.

Why it is difficult to inculcate progressive practices. Prof.-tekh.  
obr. 22 no.4:29-30 Ap '65. (MIRA 18:5)

31888

S/081/62/000/003/067/090  
B149/B101

11.0132

AUTHORS: Dorogochinskiy, A. Z., Mel'nikova, N. P., Svetozarova, O. I.,  
Shumovskaya, V. A.

TITLE: Effect of the degree of selected hydrogenation of unsaturated  
hydrocarbons in thermocracking distillate on its thermostability

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 3, 1962, 485, abstract  
3M152 (Tr. Groznensk. neft. n.-i. in-t no. 11, 1961, 53 - 57)

TEXT: The effect of the group composition of hydrocarbons on the thermal  
stability of the distillate from thermocracking, boiling out at 80 - 260°C  
(obtained from the mazout of Groznenskiy paraffin-based mixed petroleum),  
after selective hydrogenation to different degrees of the unsaturated  
hydrocarbons (original content in the distillate: 36.4%) was investigated.  
It was shown that the decrease of the fuel thermal stability depended on  
the presence of diolefins and aromatic hydrocarbons with unsaturated side  
chains. Mild hydrogenation (up to 16%) of the unsaturated hydrocarbons  
from the distillate resulted in a fuel with satisfactory thermal stability.  
Card 1/2

1. BROCKHOLM, F. A.
2. USSR (600)
4. Cartography
7. Arabian cartography in its origin and development, Izv. Vses. geog. ob-va 79, no. 5, 1947.
9. Monthly List of Russian Accessions, Library of Congress, May 1953, Uncl.



~~SHUMOVSKIY, T.A.~~ ORBELI, I.A., akademik, otvetstvennyy redaktor;  
BLEYKH, E.Yu., tekhnicheskiiy redaktor

[Three unknown sailing directions by Vasco de Gama's Arab pilot, Ahmad Ibn Majid, in the unique manuscript at the Oriental Institute of the Academy of Sciences of the U.S.S.R.] Tri neizvestnye lotsii Akhmada ibn Madzhida arabskogo lotsmana Vasko da-Gamy v unikal'noi rukopisi Instituta Vostokovedeniia AN SSSR. Predislovie D.A. Ol'derogge. [Perevod] Moskva, Izd-vo akad. nauk SSSR, 1957.  
193 p. (MLRA 10:5)

(Pilot guides)

SHUMOVSKIY, T.A.

Arabian navigation in the middle ages. Izv.Vses.geog.ob-va 89  
no.1:57-60 Ja-F '57. (MLRA 10:3)  
(Navigation) (Arabs)

SHUMOVSKIY, T.A.

Theory and practice in Arabian geography. Strany i nar. Vost.  
no.2:143-159 '61. (MIRA 15:3)  
(Geography)

SHUMOVSKIY, T.A.

Identification of two Muslim maps in the Russian translation of  
"Book of travels" by Nasir-i Khusrau. Mat. Vost. kom. Geog.  
ob-va SSSR no.1:47-54 '62. (MIRA 16:9)

SOV/65-59-4-8/14

AUTHORS: Minasyan, T.S., Pal'chikov, G.F., Bolotov, L.T.,  
Ovsiyannikov, P.V., Shumovskiy, V.G., Afanasenko, M.M.,  
Rusakov, A.P. and Karpenko, T.G.

TITLE: Investigations in the Grozny Plants on the Catalytic  
Purification of Middle Distillates Obtained During  
Thermo-Cracking Processes (Iz opyta raboty groznenskikh  
zavodov po kataliticheskoy ochistke srednikh distillyatov  
termicheskogo krekinga)

PERIODICAL: Khimiya i tekhnologiya topliv i masel, 1959, Nr 4,  
pp 44-48 (USSR)

ABSTRACT: The octane numbers of gasolines can be improved by  
catalytic cracking of the kerosine-gas-oil fractions,  
obtained during fractional distillation. This,  
however, seems unsatisfactory because these fractions are  
high quality starting materials for jet and diesel fuels  
etc. The middle fractions, obtained during thermal  
cracking, used as diesel fuels, contain a high quantity  
of unsaturated hydrocarbons and have a low cetane number.  
The quality of diesel fuels can be improved by using  
aluminium silicate catalysts and enriched secondary

Card 1/3 distillates. In this way, the consumption of unsaturated

SOV/65-59-4-8/14

Investigations in the Grozny Plants on the Catalytic Purification of Middle Distillates Obtained During Thermo-Cracking Processes

compounds is decreased and the cetane number of the diesel fuels increased, whilst maintaining the standards required by GOST for diesel fuels. Tests were carried out on substances obtained after second distillation of the broad fraction and also by using mixtures of these substances and the kerosine fraction obtained during thermal cracking. The properties of the tested materials are given in table 1 and the process conditions in table 2. Some high octane gasoline was obtained during this process. This was purified, washed and reacted with an 18 to 20% NaOH solution. After stabilisation it was purified again, treated with a 15 to 18% NaOH solution and washed. The stabilised pure gasoline had an octane number of 76. A catalyst of decreased activity (29 to 30) was used during the enriching process. The properties of the aluminium silicate catalysts are given (table 3). Table 4 gives the hydrocarbon composition of the gas. The catalytic cracking of middle fractions can

Card 2/3

SOV/65-59-4-8/14

Investigations in the Grozny. Plants on the Catalytic Purification  
of Middle Distillates Obtained During Thermo-Cracking Processes

be carried out on existing cracking plants and it is  
pointed out that the deposition of coke does not exceed  
the allowed limits. There are 4 tables.

Card 3/3

S/081/61/000/021/070/094  
B138/B101

AUTHORS: Bolotov, L. T., Shumovskiy, V. G., Ovsyannikov, P. V.,  
Pal'chikov, G. F., Minasyan, T. S., Afanasenko, M. M., Rusakov,  
A. P., Burlakov, A. G., Karpenko, T. G.

TITLE: Pilot run for the commercial processing of a secondary raw  
material on a catalytic cracking unit

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 21, 1961, 401 - 402,  
abstract 21M82 ([Tr.] Groznensk. neft. in-t. sb. 23, 1960,  
97 - 105)

TEXT: With the aim of increasing supplies of quality high-speed diesel  
fuels, experiments have been conducted, in commercial conditions, for the  
refining of the medium fractions of the thermal cracking process by re-  
distribution of the hydrogen on the aluminosilicate catalyst. The  
characteristics of the starting material and of the end product are  
enumerated. It is said that it would be possible to use this method for  
the production of the components of high-octane automobile gasolines and  
low pour-point high-speed diesel fuels. Data are given for the production

Card 1/2



S/081/62/000/012/046/063  
B156/B144

AUTHOR: Shumovskiy, V. G.

TITLE: Diesel fuel produced from thermal cracking kerosene

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 12, 1962, 503, abstract  
12M151 (Novosti نفت. i gaz. tekhn. Neftepererabotka i nefte-  
khimiya, no. 9, 1961, 3-6)

TEXT: The ideal conditions for catalytic refining of kerosene to produce  
a diesel fuel component have been determined on the basis of two years'  
operation of an industrial plant at the Groznyy refinery. It has been  
established that the process can be carried out in standard catalytic  
cracking plant. [Abstracter's notes: Complete translation.] ✓

Card 1/1

CHUMOVSKIY, Ye.G.

Deceased 1956

Metallurgy

See ILC

SHUMOVSKY, Yuriy F.

[Under the blazing African sun] Pid hariachym sontsem Afryky.  
Vinnipeg, Drukomy i nakladom Vyd.spilky "Tryzub," 1956. 169 p.  
(MLRA 9:12)

(Africa--Description and travel)

82096  
S/184/60/000/03/06/010

18.1250

AUTHORS: Yukalov, I.N., Candidate of Technical Sciences, Shumratova, G.N.,  
Engineer

TITLE: Nickel-Molybdenum and Nickel-Silicon Acidproof Alloys

PERIODICAL: Khimicheskoye mashinostroyeniye, 1960, No. 3, pp. 28 - 31

TEXT: New technological processes in the chemical industry, e.g. the evaporation of acids in a vacuum, require special equipment made of alloys with specific physical-chemical properties. For manufacturing this equipment certain nickel-molybdenum - silicon and nickel-chromium-molybdenum alloys can be used. Nickel-molybdenum alloys ЭИ460 (EI460) ЭИ461 (EI461) (corresponding to TU No. 1044), Hastelloy A, B and C have a high corrosion-resistance in a number of aggressive media. Their mechanical properties are close to those of high-grade steels. The manufacturing of seamless pipes of these alloys is not mastered; electrically welded, thin-walled pipes can be used. The EI460 alloy (about 20% Mo content) has a high corrosion-resistance in hydrochloric and sulfuric acids of any concentration and in their salts at 20°C. In sulfuric acid it maintains its resistance up to 50°C and at 100°C it is resistant when the concentration does not exceed 30-50%. In hydrochloric acid

Card 1/6